RACECOURSE WILLIAMSTOWN

– Capt. F.W. B.Cox.

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26
Manuals
1799

Notified in Army Orders for May, 1937.

Small Arms Training

Volume I, Pamphlet No. 4

Light Machine Gun

(BREN)

1937

(Printed with Amendment, 1939.)

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(Amendment No. 1 A.C.I., October, 1938, embodied in this edition.)

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A. A. TRAINING REGT R. A.
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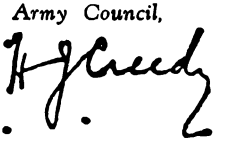

THE WAR OFFICE,
31st *May*, 1937

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GENERAL

1. The general principles governing the employment of the section in war are dealt with in F.S.R., Vol. II, Cavalry and Infantry Training, and Cavalry and Infantry Section Leading. The tactical handling of the light machine gun, when in use by cavalry and mounted on the tripod for direct fire, will follow the instructions laid down for the .303-in. Vickers machine gun and Cavalry Training.

2. The chief characteristic of the weapon is its power of delivering a volume of fire with the employment of few men. When fired from the bipod, the effective range is 1,000 yards. When fired from the tripod, given perfect conditions of visibility, this distance may be increased.

3. It is an air-cooled weapon, capable of a high rate of fire (automatic or single rounds), and is fired either shoulder-controlled from a bipod, or from a tripod. To avoid overheating, strain and excessive expenditure of ammunition and at the same time to produce the necessary volume of fire as well as to maintain accuracy, it is best, in employing automatic, to fire in bursts of four or five rounds.

The accuracy of the gun permits of only a small margin of error in aiming, range estimation or allowance for the effect of atmospheric conditions. Accurate observation of fire is, therefore, essential; if less than four or five rounds are fired in a burst, observation will be possible only in the most favourable circumstances.

4. Taking into account the time required to change barrels and magazines, a trained man should be able to maintain, if required, an average rapid rate of 120 rounds (or four magazines) a minute with accuracy.

Bearing in mind the limited amount of ammunition available with the gun during movement, a man can fire ten magazines, at the above rate, using one barrel. After this, in order to preserve the life of the barrel, it is advisable that the rate of fire should be reduced or the barrel changed, provided that a spare is available. If, however, this is not the case, the firer himself must decide, in view of the situation, whether or not the rate of fire can be reduced.

5. To ensure that the section will fulfil its role in war, the personnel must be trained so that each individual is capable of

performing the following duties concerned with the handling of the gun :—

i. To prepare the gun for firing and maintain it in action.

ii. To carry the gun and get it quickly into action on any type of ground.

iii. To fire accurately at various rates up to 120 rounds a minute according to the requirements of various types of targets likely to be encountered in battle.

iv. To observe fire and correct its application accordingly.

v. To assist forward movement by fire while at the same time ensuring that such fire does not endanger his own troops.

vi. To fire with effect at low-flying aircraft.

vii. To perform the duties assigned to any "member of" the section.

6. During peace training a history book is issued with each light machine gun; it will be kept up to date under the instructions of the responsible officer. Particulars of the number of rounds fired through each barrel, stoppages other than those cured by immediate action, replacements and breakages will be entered in it as soon as possible after their occurence. The book will always accompany the gun and will be readily available for entering details or for inspection.

7. General description of light machine gun and tripod.—

Weight of gun complete with bipod	22 lb.
Weight of spare barrel	6 „
Filled magazine (30 rounds)	2¾ „
Weight of magazine box with ten filled magazines	35 „
Length of gun overall	45½ in.
Length of barrel	25 „

Type of sights.—

Backsight—aperture

Foresight—blade

Graduations—200 yards to 2,000 yards in 50-yard clicks.

Tripod particulars.—

Weight (with anti aircraft leg 3½ lb.)	28 lb.
Weight of gun and tripod	50 „
Maximum height to bore of gun	35 in.
Elevation by elevating gear	19 deg.
Traverse given by arc	42 „

Effective Beaten Zone.

Range	*Bipod*	*Tripod*
500 yds.	200 yds. by 7½ ft.	150 yds. by 4½ ft.
1000 yds.	130 yds. by 15 ft.	100 yds. by 9 ft.

8. In this pamphlet, solely to make training easy, members of a section are sometimes referred to by "numbers". Every man in a section, however, must be an effiicient shot with the L.M.G. and, in addition, be able to carry out every duty that will maintain the gun in action under all conditions. All men, in fact, will be interchangeable so far as duties with the L.M.G. are concerned.

9. System of training.—The principles of instruction laid down in Pamphlet No. 1 of this series will be followed during instruction in the light machine gun. In addition, the following points will be observed:—

Whenever possible, the duties of No. 1 of the gun will be dealt with before those of No. 2. Practice should be arranged in such a way as to ensure that no time is wasted. This can be done by each individual carrying out a cycle of actions which leaves the gun ready for the next man. Those not actually handling the gun will be constantly questioned so that interest may be maintained.

A further demonstration should be given when it is apparent that a point is not clear.

SECTION 1.—HOLDING, AIMING AND FIRING

The importance of correct holding of the gun will be impressed on the soldier from the start, but efficiency cannot be obtained until ball ammunition is fired. Instruction in correct holding cannot, however, be delayed until this period of training, and any tendency to loose holding even during the most elementary instruction must at all times be checked; otherwise failure in marksmanship will result.

LESSON 1.—INTRODUCTION AND MAGAZINE FILLING

Instructor's Notes

Stores :—

Gun, tripod, magazine; dummies and chargers; one or more magazine fillers; gun chest and ammunition box.

1. Introduction.—During the first ten minutes of the lesson describe the gun briefly under the following headings:—

i. Name: Brief description of main groups (body, barrel, butt and piston).

ii. Gun is easy to strip and it is impossible to assemble it incorrectly.

iii. Gas operated: Rate of fire up to 120 rounds a minute and can fire "single rounds", which will be explained later. Fed by magazine containing 30 rounds.

iv. Air cooled: After prolonged fire the barrel should be changed, which operation takes about eight to ten seconds.

v. Gun is normally fired from the bipod, and is shoulder controlled. The tripod can be used in defence and is convertible for anti-aircraft firing.

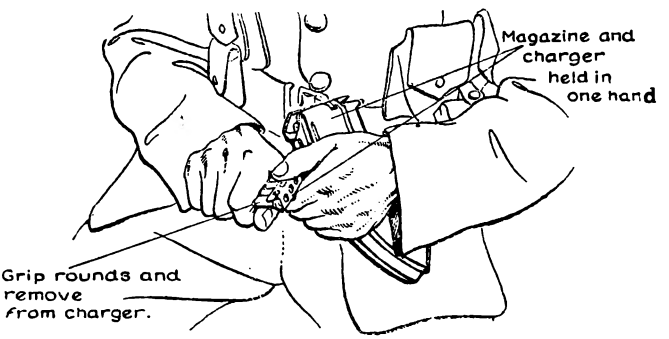
vi. Accurate weapon with an almost complete absence of recoil or shock to the firer. Few stoppages, which are all quickly remedied.

vii. Characteristics and duties (*see* paras. 2 to 5, pages 4 and 5).

2. Explain and demonstrate :—

i. **Filling by hand** (*see* Fig. 1).

When filling from chargers, hold the magazine and charger in one hand, slip out rounds and fill with the other hand.



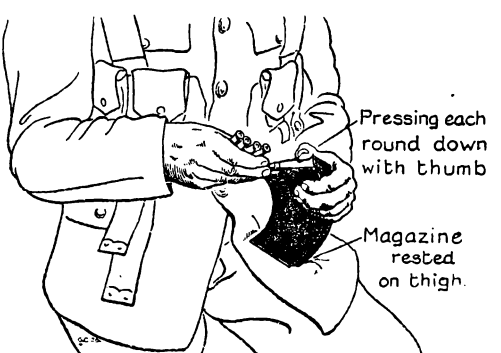


FIG. 1—Filling by Hand.

Ensure that cartridges are not rim behind rim by placing the base of the round well-back between the lips before pressing it down and forward against the rim of the preceding round or the rim of the top round already in the magazine.

Count the number of rounds (30).

When filling, ensure that ammunition is kept clean.

ii. **Filling by magazine filler** (*see* Fig. 2).

Clamp filler to right end of ammunition box (or other convenient surface) with magazine opening towards the body.

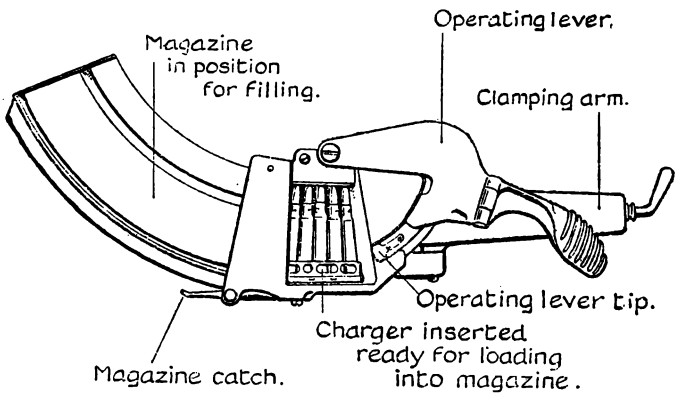


FIG. 2—Filling by Magazine Filler.

TO FILL:

Turn the operating lever over to the right and push as far forward as possible.

Pull out magazine catch.

Insert magazine, forward portion first and to the left.

Place charger in tray and pull handle sharply towards the body.

Repeat five times with fresh chargers and remove magazine by pressing in catch.

iii. **Emptying.—**

Press each round forward with the point of a bullet.

3. Give conditions of test.

4. Practise squad by hand and with the filler.

5. Demonstrate packing of gun chest. Practise squad.

LESSON 2.—LOADING, UNLOADING AND SIGHT-SETTING

Instructor's Notes

Stores :—

Gun, magazines, dummies and ground sheets.

Explain and demonstrate :—

1. **Position for loading.**—Body straight behind gun, legs together. Left hand holds butt handle; right hand holds pistol grip. First finger alongside trigger-guard when butt is on the ground.

The gun can be loaded with the change lever at "S" (Safe), "A" (Automatic) or "R" (Single rounds).

2. **Loading and unloading.**—

i. **Loading.**—Open magazine opening cover; put magazine on, forward portion first; pull cocking handle back and push forward. Put change lever to "Safe" if not already there.

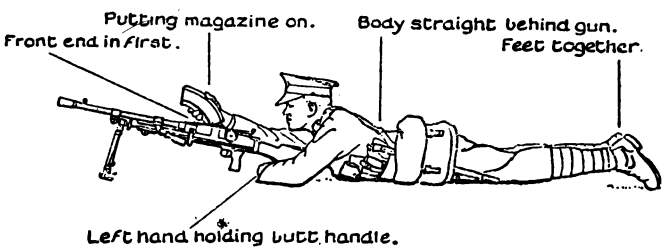


FIG. 3.

ii. **Unloading.**— Press magazine catch with palm of hand and remove magazine. Put change lever to "Automatic." Press trigger, cock gun and press trigger again. Close magazine and ejection opening covers. During elementary training or on the range stand up and report "Gun clear."

3. **Repeating orders.**—If at any time No. 1 fails to understand an executive order, he will call out "Repeat."

4. Give conditions of test.

5. Practise squad.

6. **Sight setting.**—Describe backsight drum and backsight. Turn backsight drum until range required appears in the window. The drum gives a maximum elevation of 2,000 yards and a minimum of 200 yards. Each click gives an alteration of 50 yards. When not in use, sights will be lowered.

7. Practise squad in loading, sight setting and unloading by word of command.

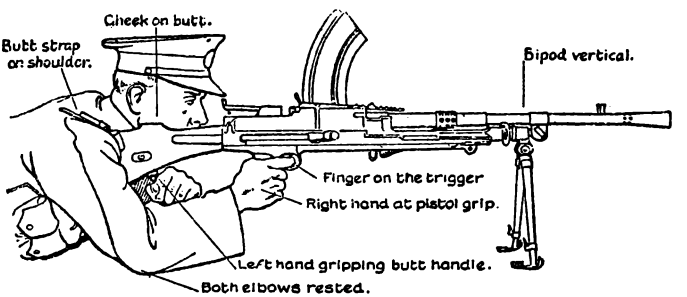
LESSON 3.—HOLDING AND AIMING

Instructor's Notes

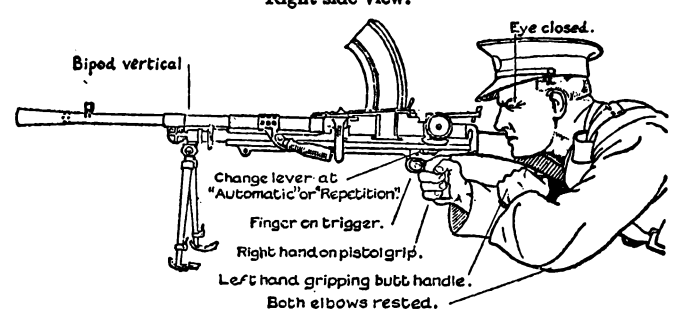
Stores :—

Gun, tripod, magazine, aiming disc, landscape target, representative target and ground sheets.

1. **Holding.**—Explain that the light machine gun, unlike the rifle, has little shock of recoil, but the automatic action of the gun, when fired from the bipod, sets up vibration which, unless controlled, throws the gun off its alignment. This control can only



Right side view.



Left side view.

FIG. 4.—Holding and Aiming.

be effected by correct holding, which is essential to accurate shooting.

2. **Aiming position.**—Demonstrate (*see* Fig. 4).—Turn butt strap to rear. Put change lever to "Automatic" or "Single round,"

raise butt into shoulder, and hold gun in shoulder firmly with both hands, right hand on pistol grip, first finger round trigger, and left hand on butt handle, both exerting a backward and downward pressure. This should be firm but not excessive; arms and shoulder muscles should not be braced. The cheek will rest lightly on butt. The bipod should be vertical so as to allow equal backward and forward movement of gun. Butt strap will be put forward before getting up from the gun and the change lever put to "Safe."

3. Practise squad.

4. **Aiming.—**

i. Explain the rules :—

The first and second rules of aiming are the same as with the rifle, but the third differs on account of the aperture backsight.

Third rule of aiming (aperture).—Look through the aperture at the target. Align the top of the foresight on the centre of the target, the point of contact thus made being in the centre of the field of view through the aperture. With the sights thus aligned look at the target.

In firing at the "small" or "large" classification target, the bottom of the aiming mark corresponds with the centre of the target.

ii. Draw or show a diagram as under :—

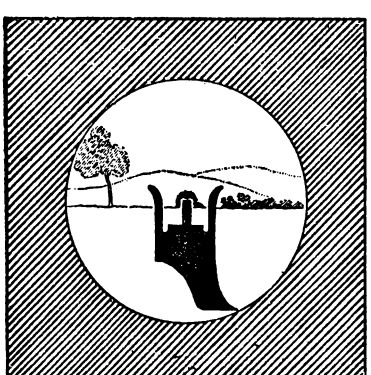


Fig. 5.—Correct Aim.

iii. Lay a correct aim (using the tripod) on a representative target. The squad in turn view it, eye in the correct firing position, *i.e.* about 2½ in. to 3 in. behind the aperture.

iv. Demonstrate how to use the elbows as a means of obtaining elevation or depression. If necessary, the bipod legs will be adjusted to suit the firer.

5. Give conditions of test.

6. Practise squad at aiming disc (no magazine on gun) and on landscape targets.

LESSON 4.—FIRING

Instructor's Notes

Stores :—

Gun, magazines and dummies. Landscape targets.

1. **Trigger pressing.**—Explain that the trigger has only one pressure, which is shorter for automatic than for repetition. As with the rifle, the trigger must be pressed by a squeezing action of the whole hand on the pistol grip.

2. **Firing.**—Explain and demonstrate in the firing position: When "bursts" are ordered, set change lever at "A". Should "single rounds" be required, set change lever at "R".

i. The normal rate of automatic fire is five bursts a minute. Correct holding must be maintained throughout each burst.

ii. The sequence of firing is :—

AIM—FIRE—OBSERVE—RE-AIM

iii. After releasing the trigger, observe the strike of the shots with a minimum movement of the head and correct if necessary.

iv. When in action, the firer is responsible for keeping a full or nearly full magazine on the gun.

v. The firer will always make allowance for side winds by applying the rules for aiming-off (*see* Rifle, Lesson 11).

vi. In single round firing, the trigger must be released after each shot.

3. Practise squad.

4. **Types of fire.**—Explain :—

i. "Single rounds" firing will be employed when it is advisable to conceal the presence of an automatic weapon. Up to 30 aimed shots can be fired in one minute ; these should be fired at such irregular intervals as to resemble rifle fire.

ii. Rapid fire is a reserve of fire and will only be used to gain surprise effect against a vulnerable target, to cover movement or in an emergency (*see* Application of Fire, Pamphlet No. 2). Firing will be in bursts of about five rounds with only such time between bursts as is necessary to observe and re-aim. With practice a rate of 120 rounds (or four magazines) a minute should be reached. Accuracy must be maintained.

5. **Moving targets.**— Question squad on the method of engaging moving targets, as taught in Pamphlet No. 3, 1937, instruction (Rifle, Lesson 12). Explain that the same method will be applied in the case of the light machine gun, except that, as its swing is limited by the bipod mounting, it is necessary to select some point in front and on the line of movement. Then just before the target has closed to the estimated lead, fire a long burst of eight or ten rounds. A succession of such bursts will be fired, a new point ahead of the target being selected each time. The correct grip with both hands must be maintained and the elbows must not be moved.

6. Give conditions of test.

7. Practise squad in Lessons 2, 3 and 4.

SECTION 2.—STRIPPING, CLEANING AND MECHANISM

In the following lessons the instructor will explain and demonstrate the stripping and assembling of each group. The parts will be named and the squad frequently questioned about them.

The lessons may be carried out with the gun on a table.

After stripping and assembling, the correct functioning of the parts will be tested.

LESSON 5.—PISTON GROUP

Instructor's Notes

Stores :—
Gun, combination tool, one dummy, ground sheets.

Piston group.—

1. Explain and demonstrate stripping and assembling :—
   i. Cock gun and press trigger.
   ii. Push out body locking pin and slide butt back.
   iii. Draw back cocking handle and push it forward.

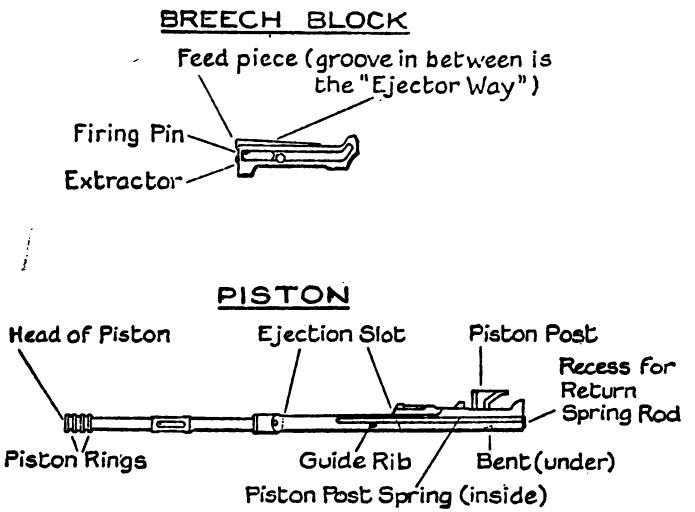


Fig. 6.—Piston Group.

   iv. Hold return spring rod to left and draw out piston and breech block.
   v. Remove breech block from piston.
   vi. Remove extractor stay and spring, and extractor.

Assemble in reverse order.
For names of parts, *see* Fig. 6.

2. Practise squad.

LESSON 6.—BARREL AND BUTT GROUP

Instructor's Notes

As for Lesson **5.**

Explain and demonstrate stripping and assembling :—

1. **Barrel group** (*see* Fig. 7).—

Turn the gun to the right and allow it to rest on the stop on the bipod sleeve.

Disengage barrel nut catch and rotate barrel nut to its full extent.

Raise carrying handle and push barrel forward and remove.

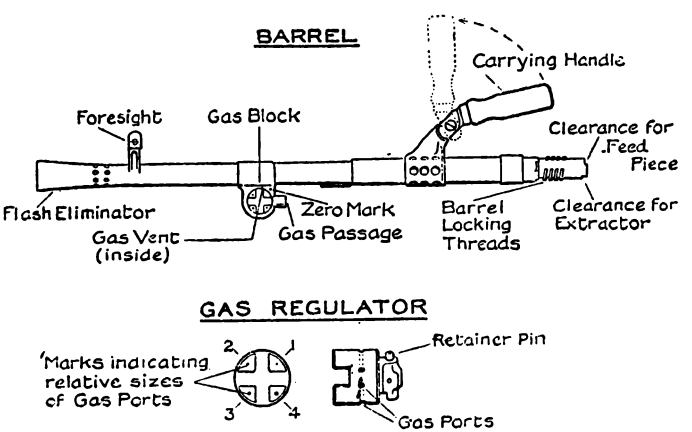


FIG. 7.—Barrel Group.

Push retainer pin flush with regulator, turn gas regulator and remove.

Assemble in reverse order, ensuring that, when the barrel is replaced, the carrying handle is at its highest point above it, that the gas regulator is at its normal setting (No. 3), and that the retainer pin is pushed through. See that the recesses on the gas regulator are in line with the cylinder locking bar, and that the barrel nut catch is engaged.

2. Practise squad.

3. **Butt group** (*see* Fig. 8).—

Push out body locking pin.

Disengage barrel nut catch and rotate barrel nut to its full extent.

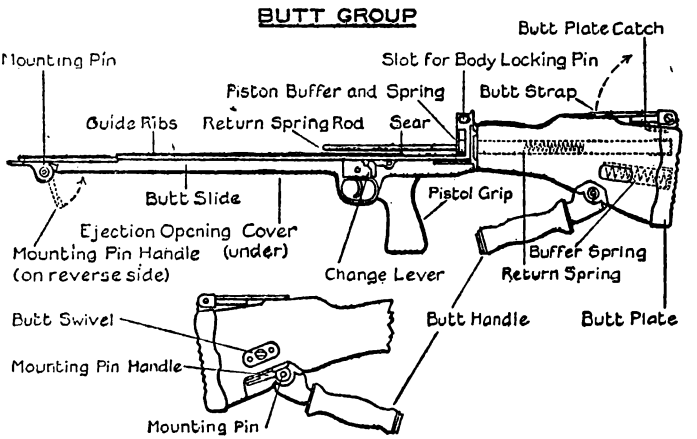


FIG. 8.

Slide off butt, holding backsight drum with the left hand. Assemble in reverse order.

4. Practise squad.

LESSON 7.—BODY GROUP AND BIPOD

Instructor's Notes

As for Lesson **5.**

Explain and demonstrate stripping and assembling:—

1. **Body group and bipod** (*see* Fig. 9).—

   Press down barrel nut retainer plunger and withdraw barrel nut.

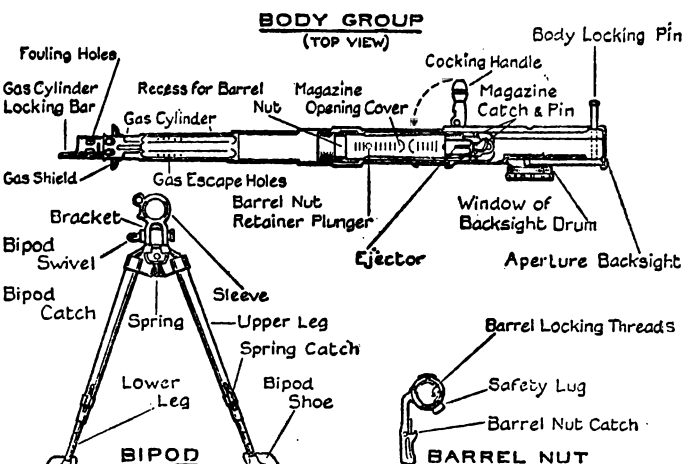


FIG. 9.

Turn body to the left and withdraw it from bipod sleeve.

Assemble in reverse order. Replace bipod.

Position the barrel nut with the barrel nut catch downwards, and tap down with the hand.

2. Practise squad.

3. Practise complete stripping and assembling.

LESSON 8.—CARE AND CLEANING, DAILY AND BEFORE FIRING.

Instructor's Notes

Stores :—

Gun, magazines, spare barrel, cleaning kit, wallet, ground sheets, gun chest and dummies.

Cleaning kit consists of :—

Cleaning rod, M.G., Mk. II.
Double pull-through and gauze.
4 gauzes.
Cylinder cleaning rod.
,, ,, wire brush.
,, ,, mop.
Combination tool.
Oil container.
Flannelette.

The various articles of cleaning kit will be explained as they are used.

Explain and demonstrate :—

1. **Daily cleaning.**—Clean both barrels, using the cleaning rod. A dry piece of flannelette, 4 in. by 2 in., will be put half way through the eye at the end of the cleaning rod. The rod will be inserted from the breech end. When the barrel has been cleaned with dry flannelette, a slightly smaller piece of flannelette, well oiled, will be similarly used to oil the barrel.

Note.—If the gun has been in use for instructional purposes, it may be necessary to strip it completely in order to clean the working parts thoroughly.

2. **Before firing.**—Strip completely. Clean and leave dry the gas affected parts, *i.e.* barrel group complete; gas cylinder, using the cylinder cleaning rod and mop; bipod sleeve; head of piston and rings; face of breech block. Clean remainder of gun and slightly oil working parts.

When assembling, set gas regulator to the smallest hole that will give reliable functioning (normally No. 3). Clean and check spare parts and magazines, paying particular attention to the magazine platform. The magazine platform and spring will only be removed when necessary.

3. * **Spare parts wallet.**—This will always be carried with the gun. The wallet contains oil can, combination tool, double pull-through and gauze, clearing plug, flannelette and spare parts tin.

4. Practise squad.

---

* Provisional.

LESSON 9.—CARE AND CLEANING, DURING INTERVALS OF FIRING, AFTER FIRING AND AFTER GAS ATTACK

Instructor's Notes

As for Lesson **8.**

Explain and demonstrate :—

1. During intervals of firing.—

Unload.

Oil working parts as necessary.

Rotate gun in bipod sleeve to clear fouling from fouling holes. In firing from the tripod, the catch on the bipod must be positioned and the bipod rotated from the left side.

Most of the fouling which passes through the gas vent is deposited in the chamber at the front of the gas cylinder. The hard fouling chokes up the holes in this chamber and makes the bipod sleeve stiff. Rotation of the gun in the bipod sleeve breaks the fouling which, on firing, is blown out of the gas escape holes. The gas shield protects No. 2 from this fouling and from the gas exhaust.

When a hot barrel is removed from the gun, it can be quickly cooled by submerging it in water, if this is available. Should this be done, care must be taken to avoid the steam blast and also that the bore is clear before use again.

Check ammunition and fill up partly used magazines.

2. Practise squad.

3. After firing.—

Strip completely. Clean barrel as for rifle, using boiling water if available, and gauze when necessary. Clean gas cylinder with cylinder cleaning rod, wire brush and mop. Clean with oily rag remaining parts and lightly scrape, if necessary, fouling from gas affected parts, using the combination tool; then dry, clean and slightly oil.

If it is not possible to clean as above immediately after firing, barrels and gas affected parts will be oiled.

Further cleaning of gas affected parts will only be carried out when necessary; particular attention, however, will be paid to the barrels, which will be cleaned and oiled daily until fouling ceases.

Clean spare parts and magazines.

Pack gun, wallet and spare barrel in gun chest.

Note.—Enter in history book number of rounds fired by each barrel (Peace).

4. Practise squad.

5. Cleaning after a gas attack.—

Similar to that for rifle as laid down in Pamphlet No. 3, 1937, Lesson 4.

LESSON 10.—MECHANISM

Instructor's Notes

Stores :—

Gun, magazines, dummies, empty case, ground sheets.

During the lesson, the gun will remain with the butt drawn back, and the piston, breech block, magazine catch and ejector removed.

Explain, demonstrate the action, and ask questions at the end of each phase.

1. Backward action.—

Some of the gases following the bullet pass through the gas vent and gas regulator into the gas cylinder. This forces the piston to the rear and compresses the return spring until the piston is stopped by the piston buffer. The empty case, being gripped by the extractor, is carried to the rear on the face of the breech block until its base meets the ejector. The case is then ejected downwards through the ejection slot in the piston.

2. Forward action.—

The piston, having been stopped by the piston buffer, is forced forward by the return spring, carrying the breech block with it. The feed piece meets the base of the first round in the magazine and forces it forward into the chamber, the extractor closing over the rim.

The piston post in its final move forward drives the firing pin against the cap of the cartridge, thus firing the round.

3. Trigger action.—

With the change lever at "Automatic," pressure on the trigger disengages the sear from the bent on the piston, and the piston is allowed to go forward. As long as the trigger is pressed, the gun will continue to fire, but, if the trigger is released, the bent will engage with the sear the next time the piston comes to the rear, stopping its forward movement.

With the change lever at "R" (*i.e.* single round), the trigger must be pressed each time a shot is to be fired, because the piston is held back after each round.

With the change lever at "Safe," the trigger is disengaged from the sear, and the gun cannot be fired.

If pressure on the trigger is maintained while the change lever is altered from "Safe" to "Automatic" and then released and the trigger pressed again, the gun will not fire. The change lever, therefore, will not be altered when the trigger is pressed (*see* Fig. 10).

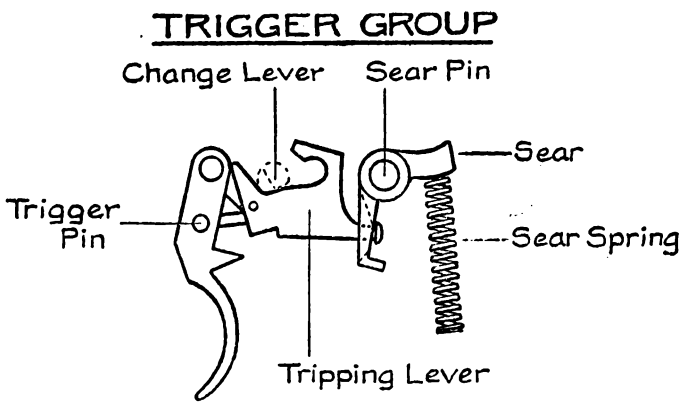


FIG. 10.

4. Empty magazine.—

If the magazine is empty, instead of meeting the base of a round, the feed piece on the breech block meets the rear of the magazine platform, and the action cannot go forward. On releasing the trigger and removing the magazine, the piston and breech block go forward until the bent on the piston meets the sear. The action is thus cocked in readiness for another magazine to be placed on the gun and firing to continue.

5. Safety device on barrel nut.—

If the barrel nut catch is not engaged, the lug on the barrel nut is rotated slightly into the piston way. If the working parts are forward, this prevents the gun being cocked owing to the lug coming into contact with the front of the ejection slot in the piston as it is drawn to the rear.

Should the working parts be back when the barrel nut catch is not engaged, the gun cannot be fired owing to the lug engaging against a projection on the piston, thus preventing the working parts from going forward.

SECTION 3.—ELEMENTARY HANDLING, IMMEDIATE ACTION AND STOPPAGES

1. The characteristics of the light machine gun and its maintenance (*see* page 6, paragraph 8), in addition to the normal duties which they would carry out in a rifle section.

2. In elementary handling every man of the section is trained in the duties of No. 1 and No. 2, as a drill. It is designed to exercise the firer in handling the light machine gun on level ground, either alone or when sufficient cover is available and the situation demands, with the assistance of a No. 2. A target will always be indicated. During movement there will be no spare barrel with the gun and the only ammunition available will be the magazines carried within the section.

3. When each man has had sufficient practice to enable him to carry out instinctively the correct action on any given command, the instructor will introduce handling exercises.

The object of these exercises is to quicken all numbers of the section in the handling of the light machine gun. Accuracy must, however, not be sacrificed for speed, and mistakes in points of elementary training will on no account be overlooked.

4. Several squads or sections can be exercised collectively under the control of one instructor. This introduces the competitive spirit. Instructors must have a carefully prepared programme of items to be included in the exercise; and, when more than two squads are being exercised simultaneously, a N.C.O. must supervise each squad.

LESSON 11.—ELEMENTARY HANDLING (No. 1 ACTING ALONE)

Instructor's Notes

Stores :—

i. *Gun, magazines with dummies; ground sheets and landscape target; wallet and pouch equipment for No. 1.*

ii. *Ground sheets in "Action position" and "Cease firing position"; the gun and wallet on rear sheets and magazine carrier on front sheets.*

iii. *Squad falls in on right in single rank and numbers off.*

Explain and demonstrate each of the following :—

1. In movement, no spare barrel will be carried and the firer, when firing rapid, must decide if it is desirable to reduce the rate of fire as indicated in para. 4 (page 4).

2. Prepare for action.—

No. 1 :—

i. Lie down and examine gun as follows: Foresight—gas regulator—bipod—barrel nut catch—backsight drum and backsight—mechanism working freely—close ejection opening cover—see that wallet is present and check contents.

ii. Examine each magazine to see that top cartridges are correctly positioned, and return to pouch equipment. Report "Gun ready."

iii. Practise squad individually.

3. Action.—

No. 1 :—

Jump up and carry gun in right hand by carrying handle to "Action position."

Place gun gently on ground. Turn carrying handle to the left—lie down behind gun—put magazine from pouch equipment on gun and load. Subsequent magazines will be taken from the carrier, which will have been placed in the "Action position."

4. Sight setting, aiming and firing.—

No. 1 :—

On a range being ordered, set sights. When a target is indicated aim and say "On" when aim is correct—Fire on the order "Fire."

5. Stop and Go on.—

i. In using dummies, parts will stop forward but with live ammunition the parts will remain back when the finger is taken off the trigger.

ii. On the order "Stop," No. 1 will lower the butt to the ground, change magazine, if necessary, and put change lever to "Safe."

iii. On the order "Go on"—Set change lever to "A" or "R" and continue firing.

6. Cease firing.—

No. 1 :—

i. Unload—close ejection opening and magazine opening covers—replace magazine in pouch. Take gun and wallet back to "Cease firing" position and lie down.

ii. Practise squad individually "Action," "Sight setting, Aiming and Firing," "Stop and Go on," "Cease firing."

7. Adjusting the gas regulator.—

i. The gas regulator will always be adjusted to the smallest hole that gives reliable functioning. Too small a hole may give stoppages and too large a hole will speed up the gun and cause unnecessary vibration.

To adjust :—

ii. No. 1 will cock gun—remove magazine—press trigger —cock gun—lower the butt to the ground—remove the combination tool from the wallet—disengage the barrel catch and push the barrel forward sufficiently far to clear the gas regulator from the gas cylinder locking bar. Place the bar of the tool in the slot of the regulator and turn in the required direction until the bar is checked by the stop in the gas block. Replace the barrel and lock barrel catch. Put magazine on—continue firing.

iii. Practise squad. Instructor orders "Load—400—Indication—Fire—More (or Less) gas."

LESSON 12.—ELEMENTARY HANDLING (No. 1 ASSISTED BY No. 2)

Instructor's Notes

Stores :—

Dummies, magazines, and carriers, wallet, spare barrel, landscape target, ground sheets.

"Cease firing position." Two sheets slightly in rear of "Action position." Magazine carriers and spare barrel on left sheet, gun and wallet on right sheet.

"Action position." Two sheets together.

1. **Duties of No. 2.**—Explain :—

   i. That in defence there will be a No. 1 and 2 with the gun. It will be the duty of No. 2 to assist No. 1 in operating the gun.

   ii. The duties of No. 2 on the following orders being given:—

"Prepare for action"	Examine magazines and spare barrel—report "Magazines and spare barrel correct."
"Action"	Carry spare barrel and magazine carriers to the "Action position"—lie down on left of gun—put magazine on gun when ordered by No. 1—watch for signals.

Note.—Order two men of the squad to "Prepare for action." "Action" and continue with explanation :—

"Sight setting, aiming and firing"	No. 2 will place his hand over No. 1's back when No. 1 says "On"—On the order or signal to fire being given, say "Fire" to No. 1.
"Stop" and "Go on"	Assist in changing magazines, if ordered.
"Cease firing"	Receive magazine from No. 1 and replace in the carrier—return to "Cease firing" position and lie down.

Note.—Order "Range" and "Target," "Fire" and "Cease firing."

iii. Practise squad by word of command.

2. **Changing the barrel** (with gun in "Action position")—

i. Explain that the barrel will be charged after firing ten magazines at the rapid rate (120 rounds a minute), (*see* page 4, para. 4).

Note.—For the instructor's demonstration and the squad's practice, an empty magazine will be on the gun and, when the barrel has been changed, a full magazine will be put on.

Give "Load" and a fire order.

Explain and demonstrate :—

Action of No. 1.—

ii. No. 1 will, when the tenth magazine is empty, pull back the cocking handle, remove the magazine and say "Barrel," at the same time closing the magazine opening cover.

No. 2 changes the barrel and, after No. 1 has opened the magazine opening cover, places a magazine on the gun. No. 1 continues firing.

Action of No. 2.—

iii. Demonstrate, with one of the squad acting as No. 1, the action of No. 2 on the order "Carry on firing."

No. 2 then says: "Tenth magazine"—"Barrel,"—rechecks gas regulator—removes breech end cover*—changes barrel when ordered—places a full magazine on gun—takes empty magazine from No. 1 and places it in box or carrier—takes another full magazine.

iv. Give conditions of test.

v. Practise squad.

3. **Signals.**—

Explain and demonstrate :—

i. Signals will be a useful means of communication between the section leader and the gun. The following signals will be used when necessary.

"Action"	Both arms raised in line with the shoulders and lowered.
"Prepare to fire"	Hand raised above the head.
"Fire" or "Go on"	Hand dropped to the side.
"Stop"	Hand waved horizontally.
"Cease firing"	Arm circled from the shoulder.

ii. Practise, using signals.

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*In the case of a mounted section the spare barrel, when required, will be taken from the spare barrel case and the hot one returned to it.

LESSON 13.—IMMEDIATE ACTION

Instructor's Notes

Stores :—

Gun, magazines, wallet, dummies, landscape target, ground sheets.

The causes of stoppages will not be taught until the men are proficient in "immediate action" (I.A.). They will then be explained as set out in the summary on pages 33 and 34.

1. Explain that, if the gun is properly balanced and cared for, stoppages other than an empty magazine will rarely occur; also that I.A. is the action performed by No. 1 to remedy a stoppage. It must be carried out quickly, and with practice should become instinctive. I.A. is not complete until the gun has been re-aimed and fired.

2. Explain and demonstrate :—

If the gun fails to fire or stops firing :—

i. I.A.: Pull back cocking handle,
Magazine off,
Press trigger,
Magazine on,*
Cock gun and fire.

ii. Give conditions of test.

iii. Practise squad by word of command.

3. Explain and demonstrate :—

If, after I.A., the gun fires one or two rounds and stops again :—

i. Pull back cocking handle and remove magazine, press trigger, cock gun. No. 1 will disconnect the barrel and adjust the gas regulator to the next largest hole—replace the barrel—place magazine on and fire.

ii. Explain that this stoppage will rarely occur with a properly balanced gun.

iii. Give conditions of test.

iv. Practise squad by word of command.

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*The magazine which has been removed is examined to see if it is empty or, that the top rounds are correctly positioned. If the rounds in the magazine are correct and it is reasonably full, the same magazine will be used.

LESSON 14.—STOPPAGES

Instructor's Notes

Stores :—

As for lesson 13.

Lesson 14 *will start with a recapitulation of Lesson* 13.

1. Explain and demonstrate :—

If, after I.A., the gun will not fire :—
Cock gun and remove magazine.
Examine for obstruction in the body or chamber.

i. If obstruction in the body, such as a jammed round or empty case, remove it—load and fire.

ii. If no obstruction in the body—insert the clearing plug into the chamber—press the trigger—cock gun—remove clearing plug and separated portion—load and fire.

2. Practise squad by word of command.

3. Explain cause of stoppages (*see* summary on pages 33 and 34).

SUMMARY OF CAUSES

The following table is for the use of instructors who, using it in conjunction with Lessons 13 and 14, should teach the causes of stoppages when the man is proficient in immediate action.

Ref. (1)	Possible cause of stoppage (2)	How to teach cause of stoppage (3)	Words of command for handling exercises (4)
Lesson 13. para. 2.	i. Empty magazine.	Explain the effect of no ammunition in the magazine. Lesson 10, para. 4.—Explain if, on attempting to apply I.A., the firer finds that there is no resistance to the cocking handle on pulling it right back, this indicates that the magazine is empty. In this case complete I.A. will not be necessary. The firer will push the cocking handle forward and change magazines.	(Instructor places empty or full magazine on gun according to the cause of the stoppage which he wishes to teach.) "Gun firing all right." "Gun stops." "Gun fires all right."
	ii. Badly filled magazine.	Explain and demonstrate overlapping rims.	
	iii. Missfire.	Explain "No gas."	
	iv. Faulty ejection.	Explain empty case in body.	
	v. Hard extraction.	Explain hard extraction, force of the gas absorbed in driving the working parts to the rear.	

SUMMARY OF CAUSES—*continued*

Ref. (1)	Possible cause of stoppage (2)	How to teach cause of stoppage (3)	Words of command for handling exercises (4)
Lesson 13, para. 3.	Insufficient gas.	This stoppage will not occur when a gun is properly balanced, *i.e.* gas regulator correctly adjusted. Care must be taken not to start with too much gas, or excessive strain and unnecessary hammering of the working parts will occur. Explain that, through lack of gas, the breech block may not be forced back far enough to engage behind the next round in the magazine or with sufficient force to ensure complete ejection of the empty case.	"Gun firing all right." "Gun stops—Fires one or two rounds and stops again—Gun fires all right."
Lesson 14.	i. Obstruction caused by mechanical breakdown. ii. Separated case.	Not set up. Explain that a separated case in the chamber is a very rare occurrence, but can be removed by the use of the clearing plug.	"Gun firing all right." "Gun stops—Will not fire." Instructor will say :— "Obstruction in body" or "Obstruction in chamber." "Gun fires all right."

LESSON 15.—ADDITIONAL STRIPPING

Instructor's Notes

Stores :—

Gun, magazines, dummies, combination tool, ground sheets.

Explain that it will be necessary at times to take down parts of the gun which are not stripped in ordinary cleaning, in order to deal with possible breakage of parts or for thorough cleaning after a gas attack.

Explain and demonstrate :—

1. Butt plate and return spring.—

i. **Butt plate.—**

To strip.—Turn the butt strap to the rear. Place the nose of a bulet on the butt plate catch close to the butt plate, and tap the base of the cartridge with the hand. Remove the butt plate.

Mechanism.—The large buffer and spring in the centre of the butt presses the butt plate to the rear. This is compressed when the gun fires and eases the shock on the shoulder of the firer.

ii. **Return spring.—**

To strip.—Insert the combination tool so that the recesses engage in the projection on the return spring cap. Press in, turn ¼ turn to the left, and carefully withdraw the return spring and rod.

To assemble.—Insert the rod and return spring in their housing. Compress the spring by means of the cap held in the combination tool. Guide the spring with the fingers, being careful not to distort it. Press in the cap and turn to the right to lock.

iii. **Butt plate.—**

To assemble.—Engage the stud on the toe of the butt plate with its recess on the toe of the butt, and lift the butt strap firmly upwards and forwards, pressing the catch with the finger of the other hand.

iv. Practise squad.

2. Magazine platform.—

To strip.—Press in the stud on the bottom plate of the magazine, and slide it off, controlling the spring as it comes out. Lift out spring and platform.

To assemble.—Replace the platform and spring. Compress the spring and slide on the bottom plate until the stud engages in the hole in the plate. A tap with the hand on the thin side of the magazine will assist it to engage.

Practise squad.

LESSON 16.—ADDITIONAL STRIPPING (*continued*)

Instructor's Notes

As in Lesson 15.

Explain and demonstrate :—

1. **Firing pin.—**

To strip.—Press out the retainer pin, taking care that the firing pin does not jump out of the back of the breech block.

Mechanism.—The firing pin spring holds the firing pin to the rear. When the piston post strikes the rear of the firing pin, the force is sufficient to overcome the spring and fire the cartridge. As soon as the piston is withdrawn, the spring withdraws the firing pin from the face of the breech block again.

To assemble.—Hold the spring in compression with the recess for the retainer pin corresponding with the retainer pin hole. Replace the retainer pin.

2. **Magazine catch and ejector.—**

To strip.—Cock the gun, press the point of the magazine catch pin and withdraw to the right to a stop. Slide magazine catch and ejector forward. To separate, squeeze the magazine catch and ejector together to compress the spring, slide the magazine catch back along the ejector and lift off.

While the magazine catch and ejector are off, the magazine opening cover can be removed by sliding to the rear.

Assemble in reverse order.

3. **Trigger group.—**

To strip.—All pins are removed from right to left. Press out change lever. Press out sear pin and remove sear and spring. Raise tripping lever, press out trigger pin, and remove trigger and tripping lever. Do not strip further than this.

To assemble.—Keep trigger in position by holding tripping lever vertical and replace trigger pin. Place sear and spring in position, with the end of the tripping lever through the slot in the sear, and insert sear pin. Hold down tripping lever slightly and press in change lever.

4. Practise squad.

SECTION 4.—LIGHT MACHINE GUN MOUNTED ON TRIPOD

1. Each light machine gun is provided with a tripod to enable the gun to be fired on a "fixed line" during darkness, fog or smoke. The tactical employment of the gun in this role is laid down in Infantry Training.

2. "Firing on fixed lines" is a term applied to defensive fire denoting that measures have been taken during daylight for maintaining elevation and direction in darkness, etc., so that fire will fall on a previously selected area of ground. With the light machine gun these measures consist of mounting the tripod and clamping the elevating gear on the traversing arc in a fixed position so that, when mounted, the fire from the gun will cover the selected area, if possible in enfilade. No fixed lines will be laid within 5 degrees of any of our own troops.

3. Overhead fire should not be attempted unless exceptionally favourable conditions exist.

4. The tripod can also be adapted for use as an anti-aircraft mounting.

LESSON 17.—TRIPOD, DESCRIPTION AND SETTING UP (GROUND)

Instructor's Notes

Stores :—

Tripod and ground sheets.

1. Explain briefly paras. 1 and 2 (page 37).

2. **Description of tripod (ground)** (*see* Fig. 11).

Explain and demonstrate :—

The tripod consists of a triangular frame at each corner of which an adjustable leg is clamped by a clamping handle and spring.

At the front of the frame is attached the mounting pivot (ground)

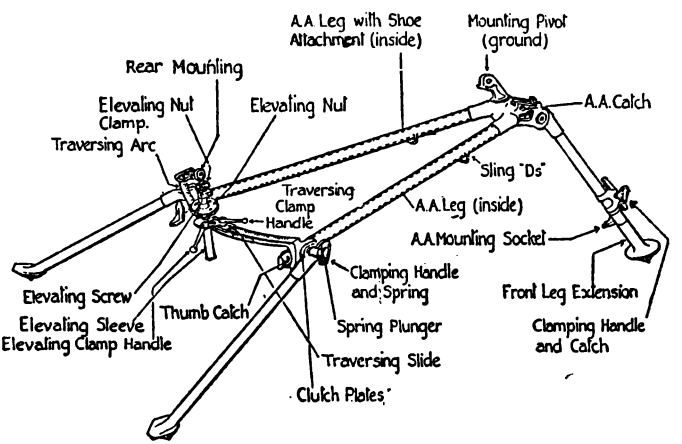

Fig. 11.—The Tripod (Ground).

which is free to move and into which the mounting pin of the gun fits. The front leg is adjustable for length by means of an extension with clamping handle and catch.

The rear of the frame is the traversing arc, graduated in ½-degree divisions, with a total traverse of 42 degrees. Mounted on the arc is the traversing slide with clamp handles, which also carries the elevating gear with elevating clamp handle, elevating nut, elevating nut clamp and rear mounting. Degree readings are taken from the two pointers on the traversing slide. The rear mounting of the elevating gear fits into the bracket on the butt of the gun.

"Ds" and slots are provided for attachment of rifle slings for transport.

Question squad.

3. Examination of tripod.—

i. Demonstrate the examination of the tripod, naming the following parts and giving reasons :—

Clamping handles and legs . .	Functioning correctly.
Front leg extension . .	In working order.
Traversing slide	Free to traverse on arc.
Elevating gear	Free to move up and down—clamping handles in working order. Elevating nut and elevating clamp nut free to rotate.

ii. Practise squad.

4. To mount the tripod.—

Explain and demonstrate :—

i. Lay the tripod on the ground with the front leg underneath. Lie or kneel behind the tripod, according to the cover available, and loosen both rear leg clamping handles. Swing legs back and clamp in line with the frame. Unclamp the front leg, swing it forward and clamp. Loosen traversing clamp handle, move to the centre of the arc and reclamp. Loosen elevating clamp handle, slide elevating sleeve forward to halfway and clamp. Raise to vertical position.

ii. Obtain direction by aligning the mountng pivot and top of elevating gear approximately on the target by moving the rear legs. Ensure that legs are firm on the ground and all clamps tight.

iii. It is of importance that the tripod be mounted so that the traversing arc is horizontal both from right to left and front to rear. Errors in this respect will affect elevation and accuracy.

5. To dismount the tripod.—

Explain and demonstrate :—

Fold elevating gear forward. Loosen elevating clamp handle. Slide the elevating sleeve to the rear until the projection on the front of the traversing slide engages in the groove on the underside of the elevating nut. Reclamp. See that the elevating screw is screwed fully down. Loosen traversing clamp handle and move the traversing slide to left or right end of arc and reclamp. Fold front leg under frame and clamp. With tripod frame on the ground, fold and clamp rear legs.

6. Practise squad in mounting and dismounting tripod.

LESSON 18.—MOUNTING AND DISMOUNTING GUN ON TRIPOD

Instructor's Notes

Stores :—

As for Lesson 17. *With gun and magazines.*

1. Explain and demonstrate :—

i. **To mount the gun on the tripod.**—

Disengage mounting pin and pull out to the right. Hold the gun by the carrying handle with the left hand, and the small of the butt with the right hand; place mounting pin housing on mounting pivot and replace mounting pin. Remove butt handle and attach butt to elevating gear.

ii. **To dismount the gun from the tripod.**—

Disengage butt handle locking pin, and mounting pin and remove gun. Replace locking and mounting pins, also butt handle.

2. Practise squad in mounting and dismounting tripod, and mounting and dismounting gun on tripod, in pairs. Detail two of the squad and order "Mount gun" and "Dismount gun."

3. **Aiming and firing.**— Action of No. 1.

Explain and demonstrate :—

Order "Load." On the range being given, adjust the backsight drum. On the target being indicated, aim the gun accurately with the aid of the traversing slide and elevating gear, clamping both when aim is accurate. The eye will be in the correct aiming position. Adopt any convenient firing position behind the gun with a minimum of exposure. (The butt need not be in the shoulder.) On the command "Fire," fire as ordered.

4. Practise squad.

LESSON 20.—TRIPOD (ANTI-AIRCRAFT)

Instructor's Notes

Stores :—

Gun, tripod, magazines with dummies. Ground sheets. One rifle.

Explain and demonstrate :—

1. Description of tripod, anti-aircraft (*see* Fig. 12).

The anti-aircraft leg conists of two tubes which are housed one in each of the main frame tubes and secured by means of spring

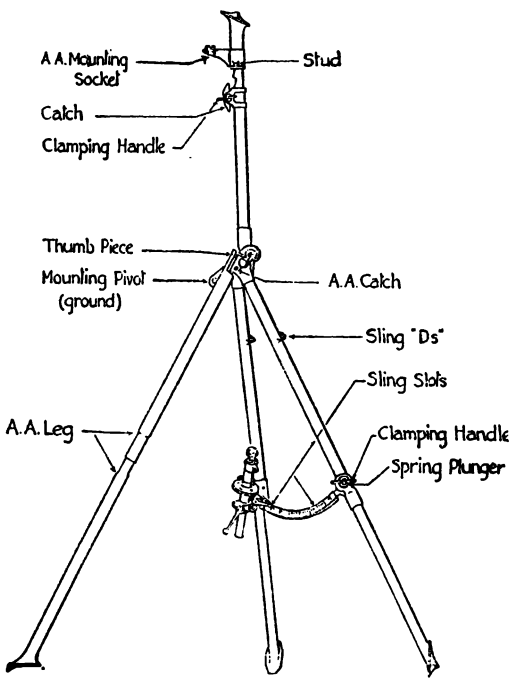

FIG. 12.—The Tripod, Anti-Aircraft.

plungers. The lower half with shoe attachment fits into the left-hand tube, shoe downwards; the upper half into the right tube with thumb catch and clamping hole to the right.

Attached to the front leg extension is the anti-aircraft mounting socket, which is free to rotate unless in its lowest position, when it is held stationary by means of the stud engaging in the catch.

At the front of the frame is the anti-aircraft catch into which the anti-aircraft leg (or bayonet standard of the rifle) fits.

2. Examination of tripod, anti-aircraft.—

i. Clamping handles and legs.	Functioning correctly.
ii. Front leg extension	In working order.
iii. Anti-aircraft mounting socket and anti-aircraft catch.	Free from dirt and catch in working order.
iv. Anti-aircraft leg (both halves).	Free to withdraw from frame tubes.

3. Mounting tripod and gun for anti-aircraft.—

i. *Duties of No. 2.—*

Resting the tripod on its side, withdraw one half of anti-aircraft leg; rotate corresponding rear leg in prolongation of frame and clamp.

Reverse tripod and repeat.

Raise tripod, engage top half of anti-aircraft leg in anti-aircraft catch; assemble anti-aircraft leg, shoe upwards.

Raise front leg to vertical position and clamp.

Loosen extension clamping screw and adjust extension so that the stud is clear of the catch.

When gun is mounted, if necessary, adjust legs to suit height of firer. When ordered by No. 1, put magazine on.

ii. *Duties of No. 1.—*

Holding the gun, carrying handle with left hand and small of butt with right hand, hook mounting pin into the anti-aircraft mounting socket.

Keeping the carrying handle fully down, pull it out and straighten. This will clamp it to the gun. Load. Put change lever to "Safe." Set sights at **500**.

Dismount in reverse order.

iii. Show use of rifle to replace anti-aircraft leg. Explain that this method will ONLY be utilized when the anti-aircraft leg is not available.

iv. Give conditions of test.

v. Practise squad in mounting and dismounting gun for anti-aircraft.

4. **Holding** (*see* Fig. 13).—

i. Hold gun with right hand on pistol grip, and left hand on carrying handle.

Balance the body on both feet with legs fairly well apart. Do not cross the feet in moving round.

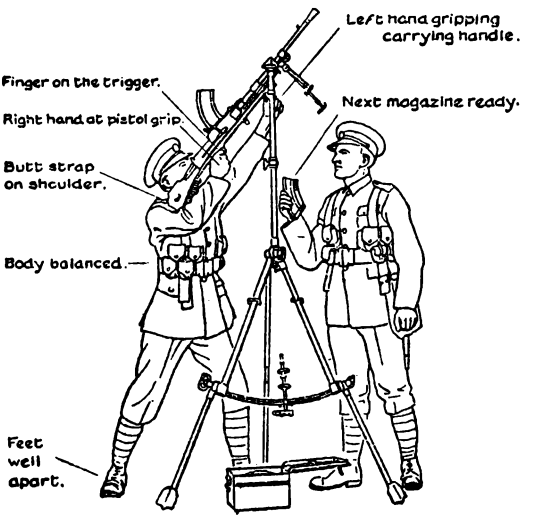

Fig. 13.—Holding.

ii. Raising and lowering of the front leg extension when necessary.

iii. Practise squad in the lesson complete.

Note.—*See* Pamphlet No. 6, Anti-Aircraft Training.

SECTION 5.—ADVANCED AND SECTION HANDLING

1. The light machine gun is the principal weapon of the infantry and every man will, therefore, be trained to use it.

2. The rifle is the personal protective weapon of the individual. There will be two snipers in each section who will be given special training in stalking and sniping.

3. Each section in the platoon is equipped with a light machine gun. The gun will normally be employed within the section under the direct control of the section commander.

In the attack, it can be operated by one man, provided that ammunition is within reach. To ensure this, a second member of the section is required to maintain an adequate supply at the gun.

4. The ammunition available in the platoon truck for the light machine guns is 3,000 rounds, of which 750 rounds for each gun is in magazines, the remainder being in boxes. The whole should be regarded as a platoon pool.

5. The platoon is the unit on which infantry tactics are based. Infantry will frequently have to fight its way forward, mainly with its own fire power, using infiltration tactics. In action, it is essential to keep advancing as long as possible before resorting to the employment of fire and manoeuvre and infiltration tactics.

This phase demands skill in the use of round and a correct appreciation of how to apply all the available fire power to penetrate between localities held by the enemy and so force him to surrender.

During the attack sections may assist each other or may use their own fire power to facilitate an advance, either by the light machine guns advancing under cover of the snipers and the section subsequently following them up, or by the snipers moving forward under cover of the light machine guns in a similar manner.

This operation requires careful control, or sections may become split up.

It must be understood clearly that the task of the section is to get on to its own objective, and that, although it may have to take up a fire position, it will be only a temporary one taken up until the opportunity to advance occurs.

In no circumstances must section commanders allow themselves to become involved in prolonged fire fights or disclose the fact that they have an automatic weapon, as long as it is possible to continue their forward movement by manoeuvre.

In defence, the principle of mutual support of defended localities will be employed. Foremost sections will automatically engage targets directly threatening them, and greater flexibility will be

obtained by firing from the bipod. In the foremost posts, therefore, guns will be given arcs of fire covering the approaches to their position and will NOT be given fixed lines.

Guns which are protected from the front by the disposition of their sections will generally be given arcs of fire and fixed lines, arranged so that ground is adequately covered, preferably by flanking fire. Alternative positions will be selected and prepared.

As sustained fire may be required, barrel changing may be necessary. The firer will, therefore, require an assistant constantly at the gun, whilst, if additional ammunition is available, other members of the section will be required for filling magazines in addition to protective duties.

6. In addition to the above, in the case of the light machine gun with headquarter troops in cavalry regiments it may be found necessary to employ the gun on its tripod for special tasks, such as flanking fire, or to support mounted movement by direct fire at longer ranges. In the event of the gun being employed as indicated, where speed may not be essential, it will be mounted on the tripod as taught in Lessons 17 and 18, and cover utilized as time and circumstances permit.

7. Training in handling began in Lessons 11 and 12 with elementary handling, which dealt with the routine duties of the Nos. 1 and 2 of the gun. The folowing lessons are called "advanced and section handling." They are designed to produce :—

i. In the individual—rapid and accurate obedience to all orders, and a correct and intelligent handling of the light machine gun in all circumstances.

ii. In the section—good team work under its commander based on intelligent use of ground, quick recognition of targets, skilful handling and the confidence that each individual has in himself, his commander and the other men of the section.

8. Advanced handling (Lessons 21, 22 and 23) consists of applying the training given in elementary handling to the use of ground and the selection of suitable fire positions for the gun, mounting it with or without the bipod or on the tripod for firing on fixed lines; using various types of cover, including camouflage.

9. Section handling (Lessons 24, 25, 26 and 27) consists of training the section with the light machine gun. It will take the form of exercises designed to reproduce conditions which may exist in attack and defence. The duties of all members of the section will be practised.

10. The direction of the enemy will always be indicated. In section handling the position of the instructor will be that of the fire unit commander in battle until he has given orders. He will then move about and check faults.

LESSON 21.—ADVANCED HANDLING (MOUNTING THE GUN ON VARIOUS TYPES OF COVER)

Instructor's Notes

Gun with sling attached, and magazine on gun.

Before the lesson, which is designed to exercise men in the duties of No. 1 only, ground containing suitable types of cover must be chosen.

Gun placed in rear position and squad on right of gun.

Explain that various types of cover may be found on service which will necessitate mounting the gun in different ways to suit the cover and that the principle of using cover is the same as with the rifle. Question the squad on the use of cover (rifle). Explain and demonstrate that it will be the duty of No. 1 to mount the gun for firing on the following types of cover. After each demonstration the squad will practise individually.

1. Low continuous cover.—

i. Using bipod.

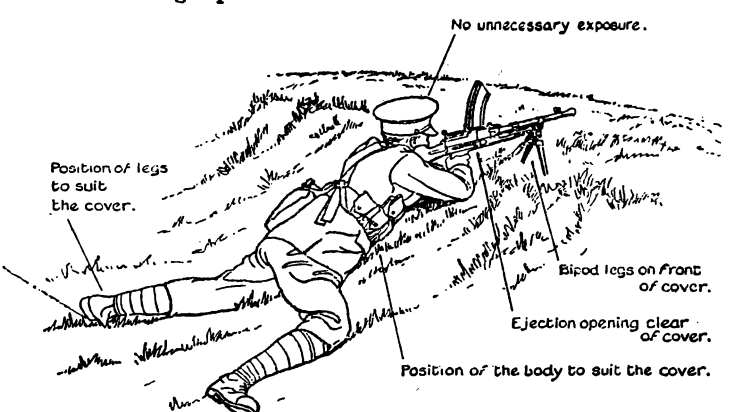
No unnecessary exposure.
Position of legs to suit the cover.
Bipod legs on front of cover.
Ejection opening clear of cover.
Position of the body to suit the cover.

FIG. 14.—Gun mounted on top of Cover: Bipod.

ii. Without use of bipod, if (i.) above is impossible.

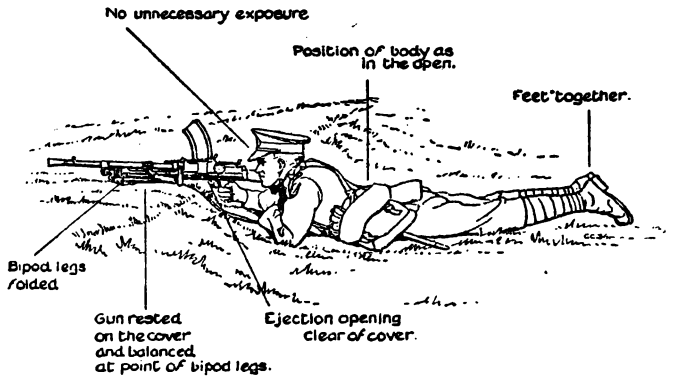
No unnecessary exposure
Position of body as in the open.
Feet together.
Bipod legs folded
Gun rested on the cover and balanced at point of bipod legs.
Ejection opening clear of cover.

FIG. 15.—Gun mounted without Binod.

2. Using a fold in the ground.—

With bipod.

FIG. 16.—Gun mounted using Fold in Ground.

3. Using a trench.—

i. With bipod (Figs. 17 and 18).

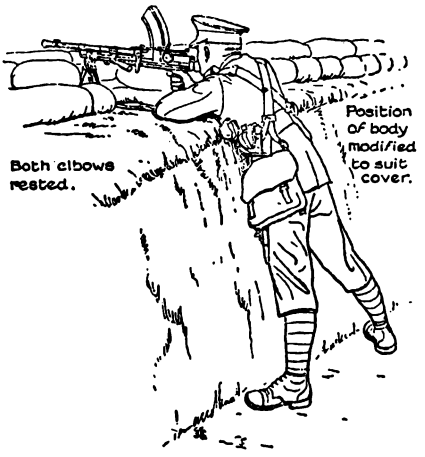

FIG. 17.—Side View.

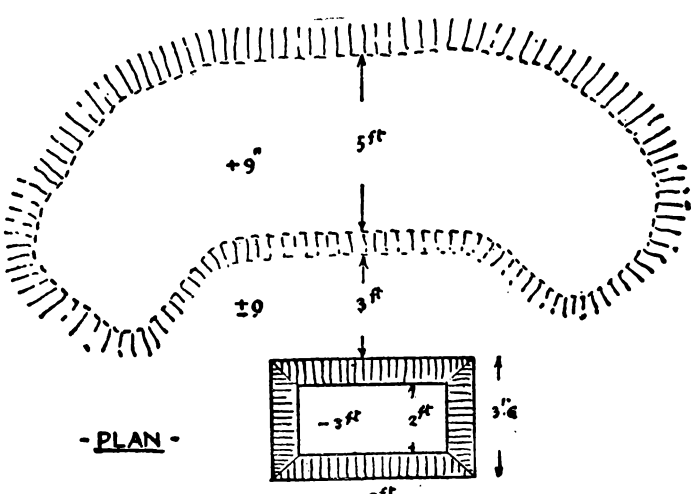

FIG. 18.—Emplacement

ii. Without bipod.

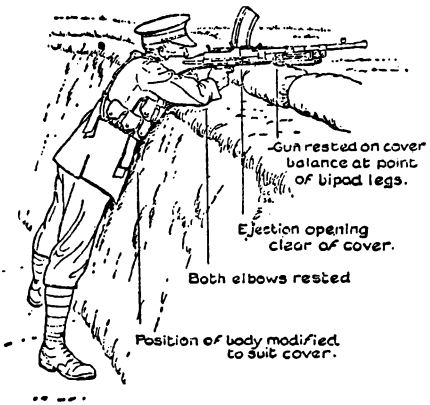

FIG. 19.—Gun mounted without Bipod.

4. Round cover.—

i. Round isolated cover (Fig. 20).

ii. Round continuous cover.

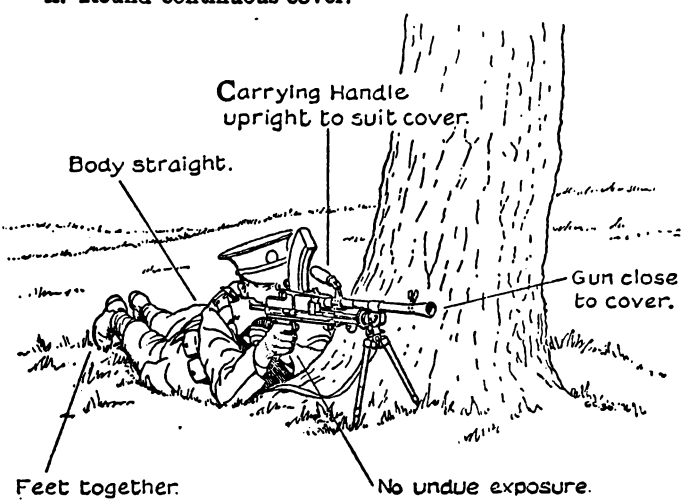

FIG. 20.—Isolated Cover.

5. On the side of a slope.—

Lengthening bipod leg.

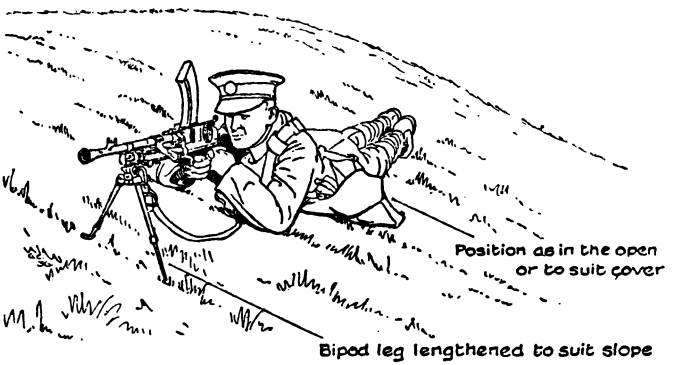

FIG. 21.—Gun mounted on a Slope.

LESSON 22.—ADVANCED HANDLING (MOVEMENT)

Instructor's Notes

Stores :—

i. *Gun and sling attached, magazines, wallet and pouch equipment for No. 1.*
ii. *Gun in rear of position. Squad on the right.*
iii. *Men will only be exercised in the duties of No. 1.*
iv. *This lesson will be carried out on ground with minor irregular features, use being made of both natural and artificial cover. Natural targets will be described.*

1. Introduction :—

i. Ask questions on points taught in "Prepare for action" (Lesson 11), and make it clear that these duties should be carried out by No. 1 before a unit leaves camp, bivouacs or billets.
ii. Explain that it is the duty of No. 1 to use ground in occupying a fire position and to mount the gun with reference to the target to be engaged so that full fire effect can be obtained with a minimum of exposure. The occupation of a position will either be made quickly, such as a rush from cover to cover, or cautiously when cover is inadequate. In the latter case it may entail crawling.
iii. Order one of the squad to "Prepare for action" as in elementary handling.

2. Explain and demonstrate :—

i. Position behind cover.—

This position is adopted in the same manner as in using the rifle behind cover, *i.e.* complete concealment for man and gun. Normally the gun is mounted on its bipod but, when cover is low, it may be laid on its side. Place a magazine from pouch equipment on the gun.

ii. Position of readiness.—

No. 1 will carry out the following actions whenever a range is ordered or, if acting apart from the section, when a target is presented :—

Set sights,

Mount the gun on cover, cautiously if situation permits,

Cock gun.

On completion of the fire order or decision to open fire—FIRE.

iii. **Cease firing.—**

The following actions will be carried out on the order "Cease firing" :—

Set change lever at "Safe."

Draw gun cautiously back.

Magazine off—unload.

Place magazine in pouch.

3. Practise squad individually on various types of cover, no further explanation being given.

4. Explain and demonstrate only :—

Position of observation.—

When the light machine gun is acting within the section, the section leader will detail an individual to assume a position of observation but, when the gun is detached, No. 1 or his No. 2 will remain in observation to observe signals, and movements of the enemy or of his own section. He will adopt a comfortable position affording concealment and a view of the front.

5. Explain and demonstrate :—

Crawl into position.—(*see* Fig. 22).

The speed with which No. 1 takes up a position will depend on the ground and cover available. He may reach it by a rush forward or have to crawl into it to avoid enemy fire or observation.

The following is a method of carrying the gun when crawling into position :—

Lying on the side—crawl on the forearm, pushing forward with the foot. With the other hand take the gun along, bipod legs either folded or open as most convenient.

6. Practise squad in 5, above.

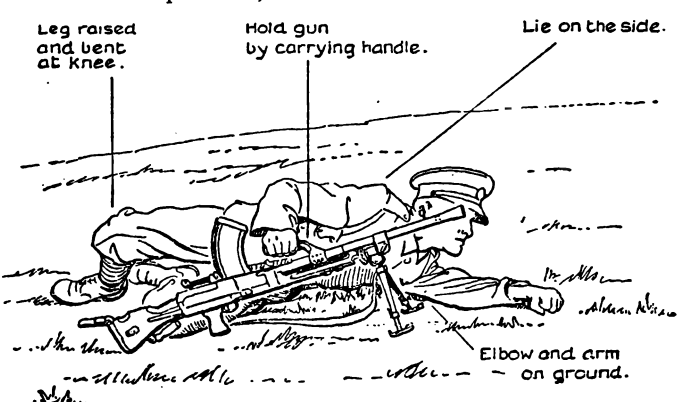

FIG. 22.—Position for Crawling.

LESSON 23.—ADVANCED HANDLING (TRIPOD)

Instructor's Notes

Stores :—

Gun, tripod, magazines. Wallet and spare barrel.

This lesson will be carried out on ground affording suitable cover behind which the gun and tripod could be mounted for firing on fixed lines.

The lesson is designed to exercise Nos. 1 and 2 in their duties.

I. Introduction :—

Explain that, in defence, one of the tasks of the light machine gun is that of firing on fixed lines, and both gun and tripod must be mounted in a position from which full fire effect can be

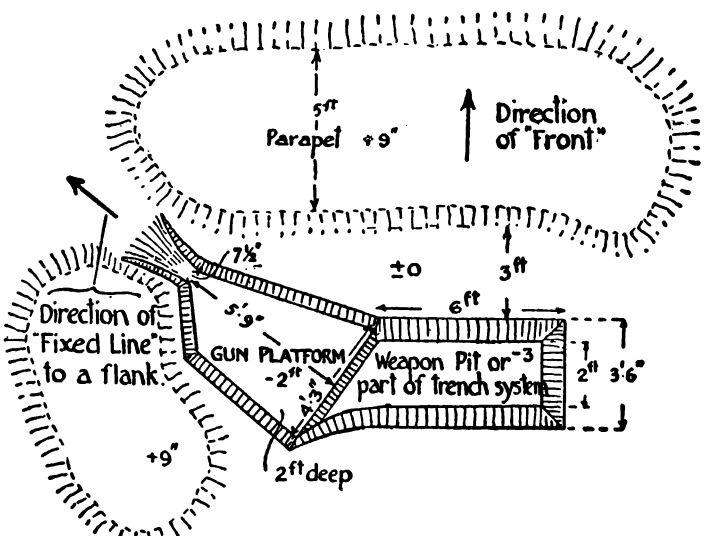

FIG. 23.—Emplacement—Fixed Line Role.

obtained with a minimum exposure for the gun numbers. If these conditions do not exist, then an emplacement of the type given above (*see* Fig. 23) should be dug as an extension of the section trench or separately according to the cover available.

2. **Mounting the tripod and gun behind cover.—**

i. Instructor points out the direction and probable line of approach of the enemy, position of our own troops, or the area to be protected and the area on which the fixed line is to fall.

ii. Explain and demonstrate how the legs of the tripod must be adjusted to suit the conformation of the ground and height of cover.

iii. (*a*) Instructor orders the gun to be mounted on the tripod with reference to a definite task, making full use of any cover, including camouflage (Lessons **17**, **18** and **19**).

(*b*) Squad views gun position from the front.

3. Practise squad in mounting the tripod and gun behind various types of cover.

LESSON 24.—SECTION HANDLING (MOVEMENT)

Instructor's Notes

Stores :—

Gun with sling attached, wallet, magazine carriers and magazines in pouch equipment of the section. (No dummies.)

One fatigueman armed with rifle and blank S.A.A.

One fatigueman with dummy screen.

Signal flags.

1. *The lesson should be carried out on ground having small undulations and minor irregular features.*

2. *Situations should be prepared beforehand, if possible, with fatiguemen or with suitable targets.*

I. Explain :—

Brief summary of Section 5, paras. 1 to 5, as applicable. The principal duties of the section, as ordered by its commander, will include:—

Mounting and maintaining the gun in action.

Carrying and replenishing S.A.A.

Selection of suitable positions for gun including alternative positions.

The detailing of tasks to snipers.

Protection.

Observation of neighbouring sections and hostile movement.

Concealment.

For movement, the section will be equipped as follows—

Sec. No.	Rifles	L.M.G.	Maga-zines	S.A.A. rifles	Mag. carriers	Normal duties
Commander ..	1	—	3	50	—	Direct and control the fire of the section.
2nd in command	1	—	3	50	—	Rifleman and S.A.A. carrier.
No. 1	—	1	3	50	—	Fire and maintain the gun in action.
No. 2	1	—	3	50	1	Rifleman and responsible for supply of S.A.A. to the gun.
No. 3	1	—	3	50	1	Riflemen and S.A.A. carriers. Those marked * are the snipers.
No. 4*	1	—	3	50	—	
No. 5*	1	—	3	50	—	
	6	1	21	350	2	

No spare barrel will be carried with the gun during movement.

2. S.A.A. supply.—During movement the immediate supply is limited to that carried by the section. Normally an individual should not carry more than three magazines, except for short distances. In addition, the 300 rounds for the rifles can, in an emergency, be filled into the magazines. The following are the duties in connection with ammunition supply:—

i. No. 1 will use one of the three magazines which he is carrying for the initial loading of the gun. The two remaining magazines will be kept as a reserve and not expended, except in case of emergency.

ii. No. 2 will at all times keep the gun supplied with ammunition. He will place himself as near the gun position as the cover will allow, so that he can carry out his duties of ammunition supply with minimum exposure and movement, or, if required, act as a rifleman. He will collect full magazines from other members of the section and place them in his carrier within reach of No. 1. As further ammunition is required, No. 2 will collect more magazines in the other carrier. Empty magazines will be redistributed by him to the section.

iii. Magazines should be refilled as opportunity offers.

3. The method of conducting will be as follows—

i. A simple opening situation dealing with the action of a section, as part of a platoon, its general line of advance and the direction of the enemy will be given.

ii. The section advances over the area selected for the exercise in the formation best suited to the ground.

iii. Signal a pre-arranged situation to be presented and order the occupation of a suitable position.

iv. Give a fire control order on which the section acts.

v. Check and comment on the action taken by each individual.

4. As proficiency increases, more difficult situations should be introdused, *e.g.*:—

i. When the gun is ordered forward from the remainder of the section.

ii. When the snipers are sent forward.

iii. Action of other members as the result of casualties.

iv. Wearing the respirator in one or more situations.

Note.—This lesson will require frequent repetition. It should be possible to deal with at least two situations during the lesson.

LESSON 25.—SECTION HANDLING (DEFENCE)

Instructor's Notes

Stores :—

Gun, wallet and spare barrel. Magazines in carriers. Ammunition box. Magazine filler. Tripod, fixing line sight and lamp. Camouflage.

1. Explain :—

i. In defence, the foremost position will consist of a belt of defended localities arranged in depth, affording each other mutual support. They will comprise a number of section posts. In front of this line is organized a co-ordinated belt of fire of all arms to break up the enemy's assault. So far as the light machine gun is concerned, it may be employed in its bipod role or mounted on the tripod and fired on a fixed line in darkness, smoke or fog. In the most forward posts guns will be given arcs of fire and will not be used on fixed lines.

ii. In either role the gun should be mounted in a position which will afford concealment and surprise. Concealment is of the utmost importance, both from ground observation and from the air. Camouflage may be used to assist when natural cover is inadequate.

iii. The selection of a position and an alternative will depend on the lie of the ground, especially on the facilities which it offers for flanking fire. As time permits, the position will be strengthened and improved by the erection of obstacles and the digging of trenches.

iv. The principal duties of the section under its commander will include—

Commander . .	Selects position and alternative position. Directs and controls fire.
2nd-in-command .	Responsible that equipment is brought forward from the platoon truck to the section position.
No. 1 . .	Mounts the gun on the bipod or tripod and maintains it in action.
No. 2	From a position beside the gun, assists No. 1 to maintain it in action. Responsible for the spare barrel.
No. 3	Ensures that the gun is supplied with S.A.A. and that magazines are kept filled.
Nos. 4 and 5 . .	Snipers—observation, reporting and sniping.

v. The following equipment will be placed with the gun in its position, having been off-loaded from the platoon truck—

One spare barrel. Tripod. Aiming lamp and box. 25 magazines. Magazine filler. Ammunition box. Fixed line sight. Camouflage.

2. Bipod role.—

i. Point out the direction of the enemy, the area to be protected and the section locality, then, acting as section commander, select the position and alternative position for the gun.

ii. Practise section in occupation of the position, firing and ammunition supply, and duties given in para. 1, iv, above.

3. Tripod role.—

Explain that, after an action as above, orders are received to prepare the gun for fixed lines. Details of the fire plan and the positions of neighbouring defended localities are described.

i. Question squad on Lesson 19, laying a fixed line.

ii. Point out the defended locality or area to be protected and the position in which the gun is to be mounted.

iii. Two members of the section not engaged with the gun will collect the tripod, lamp and other necessary equipment.

iv. No. 2 sets up the tripod.

v. As section commander, order No. 1 to lay the fixed line as taught.

4. Explain that it is advisable to complete all arrangements just before dark, so that the safety angle can be checked and the aiming lamp placed in position. Features which are likely to stand out in the failing light and which may assist in maintaining direction must be noted during daylight. A compass bearing will greatly assist. In fact, every precaution must be taken to ensure that the fire from the light machine gun does not endanger our own troops.

On a call for defensive fire, the rapid rate of 120 rounds (four magazines) a minute should be employed for the first two minutes; after this a slow rate of 30 rounds (one magazine) a minute for three minutes. After a pause, the above should be repeated so far as ammunition allows. To be effective, defensive fire must be produced immediately the signal calling for it is given. Arrangements should be made to replenish at once ammunition so expended.

5. Practise section in duties and action on a call for defensive fire, including replenishment of ammunition from the platoon truck.

LESSON 26.—SECTION HANDLING—MOUNTED UNITS (MOVEMENT)

Instructor's Notes

A section, mounted and equipped, is required for this lesson.

1. Duties.—

Explain :—

Section leader—selects the position for his section, carries the first supply of ammunition from the pack horse and places it within reach of No. 1 when the gun is in position.

No. 1—carries the gun, fires and maintains it in action.

No. 3—horse-holder.

Nos. 4 and 5—scouting and protective duties. When required, No. 4 will act as an ammunition link between the gun and pack horse.

No. 6—Pack leader.

2. Loads.—

Explain and demonstrate :—

No. 1—Light machine gun carried in two parts, *i.e.* the body and bipod in a bucket on the off side, the barrel in a detachable case on the near side.

Ammunition	3 magazines in a bandolier on the man; 4 magazines (reserve) in two wallets on the front arch of the saddle.

No. 2 (section leader)—Spare barrel and detachable case on near side.

Ammunition ..	As for No. 1.
Pack horse ..	Top load—the tripod.
	Near side—4 magazine carriers, each containing 6 magazines.
	Off side—4 magazine carriers, each containing 6 magazines.
	Total: 48 magazines = 1,440 rounds.

Total ammunition carried in the section : 62 magazines = 1,860 rounds.

The normal source of supply to the light machine gun will be from the pack horse. The ammunition in the wallets on the saddles of the section leader and No. 1 will be kept as a reserve; that in the bandoliers should be used for the initial supply when speed in opening fire is essential. When ammunition from the bandolier is expended, it should be replenished from the pack at the earliest opportunity.

3. **Fitting of light machine gun equipment.—**

No. 1. i. Fit the gun bucket as high up as possible on the off side, by passing the strap round the rear arch of the saddle. Pass the surcingle through the loop on the arm.

ii. Fit the barrel case on the near side in a similar manner as above.

iii. Place the wallets over the front arch of the saddle. The brass link on the front arch attachment passes through the slot in the connecting band and is secured by the releasable strap. The wallet straps are passed through the slots and Ds on the front of the saddle and buckled round the wallets.

No. 2. Fit the spare barrel case and wallets as in ii. and iii., above.

Pack horse—Place the tripod on the tree, traversing arc to the front and clamp.

Suspend 4 magazine carriers on the near side and 4 on the off side of the pack saddle by the Ds. Secure as follows :—

Top rear.—Pass through the loops on the pannels and through the fairway of the rear suspenders. Buckle round the magazine carriers which are attached to the hooks of the pack-saddle by Ds.

Top front.—Pass through the loops on the pannels and through the loops at the ends of the leather fitting which is attached to the cross-bar of the tree. Buckle round the magazine carriers.

Bottom.—Pass through the loops on the pannels and buckle round the magazine carriers.

4. Practise squad in fitting equipment.

5. **Mount.**—Explain and demonstrate :—

Before mounting, No. 1 will remove the barrel from the gun, place the body in the bucket and the barrel in the case. The body must be pushed fully into the bucket.

6. **Action from pack.**—Explain and demonstrate :—

   i. On the command "For action—Dismount," the section dismounts and hands over its horses as taught in Cavalry Training.

   ii. *Section leader* removes two top magazine carriers from the off side of the pack horse, selects and indicates the gun position.

   iii. *No.* 1 removes the gun body from the gun bucket and barrel from its case, assembles the gun clear of the horses and doubles with the gun to the gun position, as indicated by the section leader.

Note.—From this point onwards action will be as taught in Lesson 11.

7. **On pack.**—Explain and demonstrate :—

   On the command "On pack," the led horses are brought up and *No.* 1 removes barrel from the gun and places it in the case, and the gun body in the gun bucket.
   Section leader returns two magazine carriers to the pack horse and orders the section to mount. Before moving off he will ensure that all equipment is properly secured to the pack saddles.

8. Practise squad "Action from pack" and "On pack."

LESSON 27.—SECTION HANDLING—MOUNTED UNITS (DEFENCE)

Instructor's Notes

As for Lesson 24.

1. Explain that, when action involving the use of the tripod is considered necessary, the following additional duties to those taught in Lesson 26 will be carried out. Explain and demonstrate each in turn—On the order "For action (tripod)—Dismount":—

i. Section leader, in addition to carrying ammunition to the gun position, takes the spare barrel with him.

ii. No. 1 acts as taught in Lesson 26 and mounts the gun on the tripod (Lesson 18).

iii. No. 3—Horse holder.

iv. No. 4 removes the tripod from the pack horse and sets it up as directed by the section leader (Lesson 17) and assists No. 1 at the gun..

v. No. 5 takes two magazine carriers from the pack horse and places them at the gun position and becomes available for protective duties or to act as an ammunition link if required.

2. On pack.—

Explain and demonstrate —

i. Section leader and No. 1 act as previously taught (Lesson 26).

ii. No. 4 dismounts tripod and replaces it on pack horse and, with the assistance of No. 5, is responsible for returning all magazine carriers to the pack horse.

Before the section moves off, the leader will ensure that everything is properly secured to the pack.

3. Practise squad "For action (tripod)—Dismount" and "On pack" by word of command.

SECTION 6.—TESTS OF ELEMENTARY TRAINING

In each of the following tests the man will be allowed three attempts and, to pass, two must be correctly carried out within the time limit.

(1)	(2)	(3)	(4)
Name of test and stores required	Conditions before test	Time	Remarks
No. 1 Magazine Filling. (a) By filler. (b) By hand. Magazine filler. Ammunition box. Magazines. 6 chargers of dummy cartridges.	(a) Filler clamped ready for use to ammunition box or other convenient surface. Magazine and chargers clear of filler. (b) Ammunition in chargers, leader in sitting or kneeling position, magazine on the ground.	(a) 20 secs. from command "Go" until magazine is filled and removed. (b) 30 secs. from command "Go" until magazine is filled.	—
No. 2 Loading. Gun and one filled magazine.	Firer lying behind gun—gun unloaded—butt on ground — magazine on ground—change lever at "Automatic."	6 secs. from command "Load" until left hand returns to butt.	—
No. 3 Sight Setting, Aiming & Firing. Gun—aiming disc.	Firer lying behind gun—butt on ground — gun cocked—change lever at "Safe"—no magazine on gun—butt strap back.	9 secs. from command " . . . 'Fire' "—firer having been given range and "Automatic" or "Repetition"—until firer presses trigger.	Maximum alteration of sights 400 yards. Aiming disc held one yard in front of gun. Height of disc to be varied for each aim.

No. 4 Adjustment of Gas Regulator. Gun, filled magazine. Combination tool in bag.	Instructor will order "Load—Range—Target Fire." "Gun is firing all right"—"Gun stops"—"Gun fires ONE or TWO ROUNDS and stops AGAIN."	25 secs. from command "Again" until No. 1 has loaded and fired.	Instructor ensures that gas regulator is set at No. 3 hole at beginning of test. No. 1 performs I.A. correctly, including gas regulator set to next largest hole.
No. 5 Barrel Changing by No. 2. Gun, spare barrel, one empty and one filled magazine.	No. 1 in correct firing position—gun cocked—empty magazine on gun. No. 2 beside gun with spare barrel and full magazine.	12 secs. from command "Barrel" until No. 2 has placed full magazine on gun and says "Up."	Instructor says "Magazine empty." When No. 1 has pulled back cocking handle and removed magazine, No. 1 then says "Barrel." On command "Barrel"—No. 2 removes barrel and places spare barrel and a full magazine on gun.
No. 6 Immediate Action by No. 1. Gun, full magazine. Any suitable aiming mark.	Instructor will give range and target, "Fire" followed by "Gun is firing all right"—"Gun stops"—"Gun is firing all right."	9 secs. from command "Gun stops" until No. 1 has applied I.A. and pressed trigger again.	Instructor will satisfy himself that firer has taken an aim before pressing trigger again.
No. 7 Mounting Tripod and Gun, A.A. Tripod, gun.	Nos. 1 and 2 to be in kneeling position. Tripod to be folded correctly. Gun unloaded on ground. Sights at 200 yards.	1 minute from command "Aircraft mount gun" until gun is correctly mounted on tripod with carrying handle out. Gun loaded and sights set at 500 yards.	On command "For aircraft mount gun," No. 2 will set up tripod for A.A. action and No. 1 will mount gun on it. Each number will be tested in complete test. One number should not be penalized for slow action of the other.

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